

CLAIMS

1. A method for fabricating a fractal structure characterized in growing fractal structures from a plurality of start sites, respectively, while having said fractal structures interact with each other, to form fractal structures coupled to each other.

2. The method for fabricating a fractal structure according to claim 1 wherein growth rate from a specific start site among said plurality of start sites is determined by the probability that a material reaches a portion already grown from a remote site in a diffusion process, and the probability that a growth promotion factor reaches the portion already grown from portions grown from the other start sites in a diffusion process.

3. The method for fabricating a fractal structure according to claim 2 wherein said growth rate is proportional to the product of a power function of the probability that a material reaches a portion already grown from a remote site in a diffusion process, and a power function of the probability that a growth promotion factor reaches the portion already grown from portions grown from the other start sites in a diffusion process.

4. The method for fabricating a fractal structure according to claim 2 wherein fractal property, self-similarity, complexity of the structure, or the number of coupling can be controlled substantially parametrically.

5. The method for fabricating a fractal structure according to claim 3 wherein fractal property, self-similarity, complexity of the structure, or the number of coupling can be controlled substantially parametrically.

5 6. The method for fabricating a fractal structure according to claim 4 wherein fractal property, self-similarity, complexity of the structure, or the number of coupling can be controlled substantially parametrically by adjusting the relative potential determining diffusion of the growth promotion factor among the respective fractal structures grown from the plurality of start sites in an appropriate relation to a site at infinity.

10 7. The method for fabricating a fractal structure according to claim 5 wherein fractal property, self-similarity, complexity of the structure, or the number of coupling can be controlled substantially parametrically by adjusting the relative potential determining diffusion of the growth promotion factor among the respective fractal structures grown from the plurality of start sites in an appropriate relation to a site at infinity.

15 8. The method for fabricating a fractal structure according to claim 1 wherein an anisotropy is introduced into a space in which said fractal structures are grown.

20 9. The method for fabricating a fractal structure according to claim 2 wherein diffusion coefficient in a space in which said fractal structures are grown has an anisotropy.

25 10. The method for fabricating a fractal structure

according to claim 8 wherein fractal property,
self-similarity, complexity of the structure, or the number
of coupling can be controlled substantially parametrically.

11. The method for fabricating a fractal structure

5 according to claim 9 wherein fractal property,
self-similarity, complexity of the structure, or the number
of coupling can be controlled substantially parametrically.